pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

September 12, 2017

CERTIFIED MAIL NO. 7016 0910 0000 4016 3503

IESI PA Bethlehem Landfill, Corp
c/o Mr. Don Hallock, District General Manager
2335 Applebutter Road
Bethlehem, PA 18015

Dear Mr. Hallock:

Enclosed please find Air Quality Program Plan Approval No. 48-00027A.

I suggest that you carefully read your permit and all special conditions accompanying it, to assure all of these conditions are satisfied. Note that the **expiration date of your plan approval is March 7, 2019**. If construction/modification is not completed prior to this expiration date, please submit an extension application, which can be found at the following website:

http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-10621.

Upon completion of construction/modification, submit written notification to the Department of the date that operation is to commence as required under Section B - General Plan Approval Requirements #003 of your Plan Approval.

By copy of this letter, we are informing Lower Saucon Township and Northampton County of the issuance of your permit.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER,

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ROUTING
☑ Council
☑ Manager ori
☐ Asst. Mgr.
☑ Zoning
☐ Finance
☐ Police
☐ P. Works
☐ P/C
☐ P & R
☐ EAC
☑ Engineer
☑ Solicitor
☐ Planner
☑ Landfill
☐ EMC
☐ Other

YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If the Department can be of further assistance, please contact Alan Berardi, PE Air Quality Engineer, Air Quality Program at the above telephone number.

Sincerely,

Mark J. Wejkszner
Program Manager
Air Quality Program

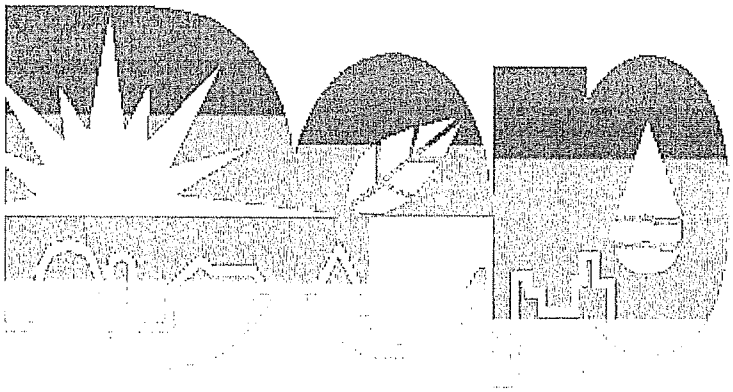
Enclosures

cc: Lower Saucon Township Secretary
Northampton County Chief Clerk
G. Duke/EPA (w/Encls.) – via e-mail

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office

Air Quality Program



PLAN APPROVAL PERMIT # 48-00027A

IESI PA BETHLEHEM LDFL CORP

Lower Saucon Township, Northampton County

Issue Date: September 8, 2017

Expiration Date: March 7, 2019

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date: September 8, 2017 Effective Date:

Expiration Date: March 7, 2019

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to construct, install, modify or reactivate the air emission source(s) more fully described in the site inventory list. This Facility is subject to all terms and conditions specified in this plan approval. Nothing in this plan approval relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each plan approval condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated as "State-Only" requirements.

Plan Approval No. 48-00027A

Federal Tax Id - Plant Code: 22-3575227-1

Owner Information

Name: IESI PA BETHLEHEM LDFL CORP
Mailing Address: 2335 APPLEBUTTER RD
BETHLEHEM, PA 18015-6004

Plant Information

Plant: IESI PA BETHLEHEM LD/BETHLEHEM FACILITY
Location: 48 Northampton County 48924 Lower Saucon Township
SIC Code: 4953 Trans. & Utilities - Refuse Systems

Responsible Official

Name: JASON CRAFT
Title: EASTERN REGION VP
Phone: (518) 951 - 9690

Plan Approval Contact Person

Name: DON HALLOCK
Title: DISTRICT GENERAL MANAGER
Phone: (484) 456 - 1650

[Signature] _____
MARK J. WEJKSZNER, / NORTHEAST REGION AIR PROGRAM MANAGER

Plan Approval Description

This Plan Approval is for the increase in landfill capacity of approximately 3,669,600 cubic yards utilizing the existing landfill gas flare (C002) currently installed and establishes a synthetic minor limit for carbon monoxide (CO) for the facility.

SECTION A. Table of Contents

SECTION A. Plan Approval Inventory List

Source ID	Source Name	Capacity/Throughput	Fuel/Material
001	LANDFILL OPERATIONS	145.000 Tons/HR	Municipal Waste
		200.000 Tons/HR	MUNICIPAL WASTE
C002	LANDFILL GAS COLLECTION/ REPLACEMENT FLARE		
S001	ENCLOSED FLARE STACK		

PERMIT MAPS

SECTION B. General Plan Approval Requirements

#001 [25 Pa. Code § 121.1]

Definitions

Words and terms that are not otherwise defined in this plan approval shall have the meanings set forth in Section 3 of the Air Pollution Control Act (35 P.S. § 4003) and 25 Pa. Code § 121.1.

#002 [25 Pa. Code § 127.12b (a) (b)]

Future Adoption of Requirements

The issuance of this plan approval does not prevent the future adoption by the Department of any rules, regulations or standards, or the issuance of orders necessary to comply with the requirements of the Federal Clean Air Act or the Pennsylvania Air Pollution Control Act, or to achieve or maintain ambient air quality standards. The issuance of this plan approval shall not be construed to limit the Department's enforcement authority.

#003 [25 Pa. Code § 127.12b]

Plan Approval Temporary Operation

This plan approval authorizes temporary operation of the source(s) covered by this plan approval provided the following conditions are met.

(a) When construction, installation, modification, or reactivation is being conducted, the permittee shall provide written notice to the Department of the completion of the activity approved by this plan approval and the permittee's intent to commence operation at least five (5) working days prior to the completion of said activity. The notice shall state when the activity will be completed and when the permittee expects to commence operation. When the activity involves multiple sources on different time schedules, notice is required for the commencement of operation of each source.

(b) Pursuant to 25 Pa. Code § 127.12b (d), temporary operation of the source(s) is authorized to facilitate the shakedown of sources and air cleaning devices, to permit operations pending the issuance of a permit under 25 Pa. Code Chapter 127, Subchapter F (relating to operating permits) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contaminant aspects of the source.

(c) This plan approval authorizes a temporary operation period not to exceed 180 days from the date of commencement of operation, provided the Department receives notice from the permittee pursuant to paragraph (a), above.

(d) The permittee may request an extension of the 180-day shakedown period if further evaluation of the air contamination aspects of the source(s) is necessary. The request for an extension shall be submitted, in writing, to the Department at least 15 days prior to the end of the initial 180-day shakedown period and shall provide a description of the compliance status of the source, a detailed schedule for establishing compliance, and the reasons compliance has not been established. This temporary operation period will be valid for a limited time and may be extended for additional limited periods, each not to exceed 180 days.

(e) The notice submitted by the permittee pursuant to subpart (a) above, prior to the expiration of the plan approval, shall modify the plan approval expiration date on Page 1 of this plan approval. The new plan approval expiration date shall be 180 days from the date of commencement of operation.

#004 [25 Pa. Code § 127.12(a) (10)]

Content of Applications

The permittee shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice as described in the plan approval application submitted to the Department.

#005 [25 Pa. Code §§ 127.12(c) and (d) & 35 P.S. § 4013.2]

Public Records and Confidential Information

(a) The records, reports or information obtained by the Department or referred to at public hearings shall be available to the public, except as provided in paragraph (b) of this condition.

(b) Upon cause shown by the permittee that the records, reports or information, or a particular portion thereof, but not emission data, to which the Department has access under the act, if made public, would divulge production or sales figures or methods, processes or production unique to that person or would otherwise tend to affect adversely the

SECTION B. General Plan Approval Requirements

competitive position of that person by revealing trade secrets, including intellectual property rights, the Department will consider the record, report or information, or particular portion thereof confidential in the administration of the act. The Department will implement this section consistent with sections 112(d) and 114(c) of the Clean Air Act (42 U.S.C.A. § § 7412(d) and 7414(c)). Nothing in this section prevents disclosure of the report, record or information to Federal, State or local representatives as necessary for purposes of administration of Federal, State or local air pollution control laws, or when relevant in a proceeding under the act.

#006 [25 Pa. Code § 127.12b]

Plan Approval terms and conditions.

[Additional authority for this condition is derived from 25 Pa. Code Section 127.13]

(a) This plan approval will be valid for a limited time, as specified by the expiration date contained on Page 1 of this plan approval. Except as provided in § § 127.11a and 127.215 (relating to reactivation of sources; and reactivation), at the end of the time, if the construction, modification, reactivation or installation has not been completed, a new plan approval application or an extension of the previous approval will be required.

(b) If construction has commenced, but cannot be completed before the expiration of this plan approval, an extension of the plan approval must be obtained to continue construction. To allow adequate time for departmental action, a request for the extension shall be postmarked at least thirty (30) days prior to the expiration date. The request for an extension shall include the following:

(i) A justification for the extension,
(ii) A schedule for the completion of the construction

If construction has not commenced before the expiration of this plan approval, then a new plan approval application must be submitted and approval obtained before construction can commence.

(c) If the construction, modification or installation is not commenced within 18 months of the issuance of this plan approval or if there is more than an 18-month lapse in construction, modification or installation, a new plan approval application that meets the requirements of 25 Pa. Code Chapter 127, Subchapter B (related to plan approval requirements), Subchapter D (related to prevention of significant deterioration of air quality), and Subchapter E (related to new source review) shall be submitted. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified.

#007 [25 Pa. Code § 127.32]

Transfer of Plan Approvals

(a) This plan approval may not be transferred from one person to another except when a change of ownership is demonstrated to the satisfaction of the Department and the Department approves the transfer of the plan approval in writing.

(b) Section 127.12a (relating to compliance review) applies to a request for transfer of a plan approval. A compliance review form shall accompany the request.

(c) This plan approval is valid only for the specific source and the specific location of the source as described in the application.

#008 [25 Pa. Code § 127.12(4) & 35 P.S. § 4008 & § 114 of the CAA]

Inspection and Entry

(a) Pursuant to 35 P.S. § 4008, no person shall hinder, obstruct, prevent or interfere with the Department or its personnel in the performance of any duty authorized under the Air Pollution Control Act.

(b) The permittee shall also allow the Department to have access at reasonable times to said sources and associated air cleaning devices with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act and regulations adopted under the act.

SECTION B. General Plan Approval Requirements

(c) Nothing in this plan approval condition shall limit the ability of the Environmental Protection Agency to inspect or enter the premises of the permittee in accordance with Section 114 or other applicable provisions of the Clean Air Act.

#009 [25 Pa. Code 127.13a]

Plan Approval Changes for Cause

This plan approval may be terminated, modified, suspended or revoked and reissued if one or more of the following applies:

(a) The permittee constructs or operates the source subject to the plan approval in violation of the act, the Clean Air Act, the regulations promulgated under the act or the Clean Air Act, a plan approval or permit or in a manner that causes air pollution.

(b) The permittee fails to properly or adequately maintain or repair an air pollution control device or equipment attached to or otherwise made a part of the source.

(c) The permittee fails to submit a report required by this plan approval.

(d) The Environmental Protection Agency determines that this plan approval is not in compliance with the Clean Air Act or the regulations thereunder.

#010 [25 Pa. Code §§ 121.9 & 127.216]

Circumvention

(a) The permittee, or any other person, may not circumvent the new source review requirements of 25 Pa. Code Chapter 127, Subchapter E by causing or allowing a pattern of ownership or development, including the phasing, staging, delaying or engaging in incremental construction, over a geographic area of a facility which, except for the pattern of ownership or development, would otherwise require a permit or submission of a plan approval application.

(b) No person may permit the use of a device, stack height which exceeds good engineering practice stack height, dispersion technique or other technique which, without resulting in reduction of the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise be in violation of this plan approval, the Air Pollution Control Act or the regulations promulgated thereunder, except that with prior approval of the Department, the device or technique may be used for control of malodors.

#011 [25 Pa. Code § 127.12c]

Submissions

Reports, test data, monitoring data, notifications shall be submitted to the:

Regional Air Program Manager
PA Department of Environmental Protection
(At the address given on the plan approval transmittal letter or otherwise notified)

#012 [25 Pa. Code § 127.12(9) & 40 CFR Part 68]

Risk Management

(a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).

(b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the facility. The permittee shall submit the RMP to the Environmental Protection Agency according to the following schedule and requirements:

(1) The permittee shall submit the first RMP to a central point specified by the Environmental Protection Agency no later than the latest of the following:

SECTION B. General Plan Approval Requirements

(i) Three years after the date on which a regulated substance is first listed under § 68.130; or,
(ii) The date on which a regulated substance is first present above a threshold quantity in a process.

(2) The permittee shall submit any additional relevant information requested by the Department or the Environmental Protection Agency concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.

(3) The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.

(c) As used in this plan approval condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

#013 **[25 Pa. Code § 127.25]**

Compliance Requirement

A person may not cause or permit the operation of a source subject to § 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.

SECTION C. Site Level Plan Approval Requirements

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §123.1]
Prohibition of certain fugitive emissions

(a) The permittee may not permit the emission into the outdoor atmosphere of fugitive air contaminant from a source other than the following:

(1) Construction or demolition of buildings or structures.

(2) Grading, paving and maintenance of roads and streets.

(3) Use of roads and streets. Emissions from material in or on trucks, railroad cars and other vehicular equipment are not considered as emissions from use of roads and streets.

(4) Clearing of land.

(5) Stockpiling of materials.

(6) Open burning operations.

(7) Sources and classes of sources other than those identified in paragraphs (1)-(6), for which the operator has obtained a determination from the Department that fugitive emissions from the source, after appropriate control, meet the following requirements:

(i) the emissions are of minor significance with respect to causing air pollution; and

(ii) the emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

 # 002 [25 Pa. Code §123.2]
Fugitive particulate matter

The permittee may not permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in SECTION C, Site Level Requirement, Condition #001(relating to prohibition of certain fugitive emissions) if such emissions are visible at the point the emissions pass outside the person's property.

 # 003 [25 Pa. Code §123.31]
Limitations

MALODOR EMISSIONS

The permittee may not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source in such a manner that the malodors are detectable outside the property of the person on whose land the source is being operated.

 # 004 [25 Pa. Code §123.41]
Limitations

(a) A person may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

(1) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any 1 hour.

(2) Equal to or greater than 60% at any time.

SECTION C. Site Level Plan Approval Requirements

 # 005 [25 Pa. Code §123.42]
Exceptions

(a) The limitations of SECTION C, Site Level Requirement, Condition #004 shall not apply to a visible emission in any of the following instances:

(1) When the presence of uncombined water is the only reason for failure of the emission to meet the limitations.

(2) When the emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.

(3) When the emission results from sources specified in SECTION C, Site Level Requirement, Condition #001 relating to prohibition of certain fugitive emissions).

(4) When arising from the production of agricultural commodities in their unmanufactured state on the premises of the farm operation.

 # 006 [25 Pa. Code §127.12b]
Plan approval terms and conditions.
The carbon monoxide (CO) emissions from this facility shall be limited to 99.9 tons per year (12 month rolling sum).

II. TESTING REQUIREMENTS.

 # 007 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

All sampling, testing and analyses performed in compliance with the requirements of any section of this permit shall be done in accordance with General Tilte V requirement #021.

 # 008 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

(a) If required by the Department, the permittee shall perform a stack test, within the time frame specified by the Department.

(b) All performance tests hall be conducted in accordance with 40 CFR Part 60, Section 60.754 and the Departments's source testing procedures described in the latest Source Testing Manual reference in 25 Pa. Code, Section 139.4(5).

III. MONITORING REQUIREMENTS.

 # 009 [25 Pa. Code §123.43]
Measuring techniques

(a) Visible emissions may be measured using either of the following:

(1) A device approved by the Department and maintained to provide accurate opacity measurements.

(2) Observers, trained and qualified to measure plume opacity with the naked eye or with the aid of any devices approved by the Department.

 # 010 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

FUGITIVE, VISIBLE AND MALODOR EMISSIONS

SECTION C. Site Level Plan Approval Requirements

(a) The permittee shall conduct weekly inspections of the facility perimeter, during daylight hours when the plant is in operation, to detect visible, fugitive, and malodor emissions as follows:

(1) Visible emissions in excess of the limits stated in Site Level Requirement, Condition #004.

(2) Visible emissions may be measured according to the methods specified in SECTION C, Site Level Requirement, Condition #009, or alternatively, plant personnel who observe any visible emissions (i.e. emissions in excess of 0% opacity) will report the incident of visible emissions to the Department within four (4) hours of each incident and make arrangements for a certified observer to verify the opacity of the emissions.

(3) The presence of fugitive emissions visible beyond the boundaries of the facility, as stated in SECTION C, Site Level Requirement, Condition #002.

(4) The presence of malodor emissions beyond the boundaries of the facility, as stated in SECTION C, Site Level Requirement, Condition #003.

IV. RECORDKEEPING REQUIREMENTS.

 # 011 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

All records, reports and analyses results generated in compliance with the requirments of any section of this permit shall be maintained in accordance with General Title V Requiremnt #022, Section (b), and shall be made available to the Department upon written or verbal request at a reasonable time.

 # 012 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

FUGITIVE, VISIBLE AND MALODOR EMISSIONS

(a) The permittee shall, at the conclusion of each weekly inspection, record all occurrences of fugitive and visible emissions, and malodors which deviate from the limitations stated in SECTION C, Site Level Requirement, Conditions #002, #003, and #004 in a log book.

(b) The facility shall record the weather conditions (wind, speed, wind direction, and ambient temperature) from an onsite or other local calibrated meteorological system during the occurrences of fugitive or visible emissions and malodors which deviate from the limitations stated in SECTION C, Site Level Requirement, Conditions #002, #003, and #004 to enable investigation of the cause and impact of the deviation to the offsite locations.

(c) The permittee shall record any and all corrective action(s) taken to abate each recorded deviation or prevent future occurrences.

V. REPORTING REQUIREMENTS.

 # 013 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

FUGITIVE, VISIBLE AND MALODOR EMISSIONS

(a) On a semi-annual basis, the permittee shall compile a report of all logged instances of deviation of the fugitive, visible and malodor emission limitations that occured and the actions taken in response to them. This report shall be submitted to the Department.

(b) If no deviations have been logged during the reported period, this report shall be retained at the facility and be made available to the Department upon request.

SECTION C. Site Level Plan Approval Requirements

 # 014 [25 Pa. Code §135.21]
Emission statements

(a) Except as provided in subsection (d), this section applies to stationary sources or facilities:

(1) Located in an area designated by the Clean Air Act as a marginal, moderate, serious, severe or extreme ozone nonattainment area and which emit oxides of nitrogen or VOC.

(2) Not located in an area described in subparagraph (1) and included in the Northeast Ozone Transport Region which emit or have the potential to emit 100 tons or more oxides of nitrogen or 50 tons or more of VOC per year.

(b) The owner or operator of each stationary source emitting oxides of nitrogen or VOC's shall provide the Department with a statement, in a form as the Department may prescribe, for classes or categories of sources, showing the actual emissions of oxides of nitrogen and VOCs from that source for each reporting period, a description of the method used to calculate the emissions and the time period over which the calculation is based. The statement shall contain a certification by a company officer or the plant manager that the information contained in the statement is accurate.

(c) Annual emission statements are due by March 1 for the preceding calendar year beginning with March 1, 1993, for calendar year 1992 and shall provide data consistent with requirements and guidance developed by the EPA. The guidance document is available from: United States Environmental Protection Agency, 401 M. Street, S.W., Washington, D.C. 20460. The Department may require more frequent submittals if the Department determines that one or more of the following applies:

(1) A more frequent submission is required by the EPA.

(2) Analysis of the data on a more frequent basis is necessary to implement the requirements of the act.

(d) Subsection (a) does not apply to a class or category of stationary sources which emits less than 25 tons per year of VOC's or oxides of nitrogen, if the Department in its submissions to the Administrator of the EPA under section 182(a)(1) or (3)(B)(ii) of the Clean Air Act (42 U.S.C.A. 7511a(a)(1) or (3)(B)(ii)) provides an inventory of emissions from the class or category of sources based on the use of the emission factors established by the Administrator or other methods acceptable to the Administrator. The Department will publish in the Pennsylvania Bulletin a notice of the lists of classes or categories of sources which are exempt from the emission statement requirement under this subsection.

 # 015 [25 Pa. Code §135.3]
Reporting

(a) A person who owns or operates a source to which this chapter applies, and who has previously been advised by the Department to submit a source report, shall submit by March 1 of each year a source report for the preceding calendar year. The report shall include information for all previously reported sources, new sources which were first operated during the proceeding calendar year and sources modified during the same period which were not previously reported.

(b) A person who receives initial notification by the Department that a source report is necessary shall submit an initial source report within 60 days after receiving the notification or by March 1 of the year following the year for which the report is required, whichever is later.

(c) A source owner or operator may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

VI. WORK PRACTICE REQUIREMENTS.

 # 016 [25 Pa. Code §123.1]
Prohibition of certain fugitive emissions

SECTION C. Site Level Plan Approval Requirements

(a) 25 Pa. Code 123.1(c) requires the person responsible for sources with fugitive emissions potential to take all reasonable actions to prevent particulate matter from becoming airborne. 25 Pa. Code 273.217 requires landfill operators to implement fugitive dust control measures. This criteria specifies the reasonable actions that are necessary for the prevention of fugitive dust emissions from the operation of landfills in accordance with these requirements. Landfills which meet this criteria are considered to be of minor significance with regards to particulate emissions and are not subject to Air Quality permitting requirements when no gas venting system is present.

(1) Parking lots/areas and the landfill access roadways from the public highway to the landfill and other haul roads inside the landfill shall be paved, maintained, and cleaned by vacuum sweeping or any other approved means. All parking lots/areas shall be cleaned at least weekly and the access roadways cleaned at least daily.

(2) The access roadways if unpaved at the unloading areas (active cells) shall have a crown so that water runs off and does not pool. Water or other chemical dust suppressants shall be applied to the unpaved road surface to reduce fugitive dusts. Water, if used, shall be applied at least twice a day. Chemical dust suppressants, if used, shall be applied as needed, but at least once a month.

(3) Water or other chemical dust suppressants shall be applied on the shoulder of access roadways and the shoulder of the public highway for a distance of 500 feet in both directions. Water, if used, shall be applied at least twice a day. Chemical dust suppressants, if used, shall be applied at least once a month. Application of dust suppressants on the public highway shall be done in accordance with the appropriate-PA Department of Transportation (PennDOT) Bulletins.

(4) No waste oil shall be used as a dust suppressant for the unpaved surface.

(5) Earth or other material deposited by trucking or other means on the paved roadways, including public highway, shall be promptly removed from the paved roadways.

(6) Upon leaving the landfill, the wheels and chassis of the vehicles which were used to transport wastes and earth shall be washed to prevent earthen carryout onto roadways. As soon as an undercarriage wash station is installed and operational, the undercarriage, in addition to the wheels and chassis of vehicles which were used to transport wastes and earth shall be cleaned before leaving the landfill.

(7) All trucks entering the landfill shall be covered.

(8) A speed limit of 15 miles per hour shall be observed on all paved access roadways and 10 miles per hour on all unpaved areas. Speed limit signs shall be posted consistent with the requirements of PennDOT (overall dimension 30" x 24", "SPEED LIMIT" in 4" letters and 10"numerals).

(9) A detailed record describing the time, location, type and amount of roadway surface treatment shall be maintained at the landfill site for at least two years. As a minimum, the record shall include the following:

(i) For paved roads and parking lot areas:

(A) Daily log of engine run time and odometer reading for the vacuum sweeper, or other approved method.

(B) Daily log of time and location of vacuum sweeping.

(C) Identification, time and location of any maintenance, repair, patching or repaving of roads.

(D) A log explaining the reason any required vacuum sweeping was not performed.

(ii) For unpaved roads and shoulders of paved roads:

(A) Log of time and location of treated areas.

(B) Daily log of meter reading of spray-bar and/or pump and odometer reading of trucks used to apply dust suppressants and the identification of such dust suppressants.

SECTION C. Site Level Plan Approval Requirements

(C) Daily log of the dilution ratios of the dust suppressants and diluent used if chemical suppressants are used.

(D) Purchase records of the chemical suppressants, if any.

(iii) Records required under this Permit shall be kept on site for a minimum period of five (5) years, and shall be made available to the Department upon its request.

 # 017 [25 Pa. Code §123.1]
Prohibition of certain fugitive emissions

(a) A person responsible for any source specified in SECTION C, Site Level Requirement, Condition #001 shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions shall include, but not be limited to, the following:

(1) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads, or the clearing of land.

(2) Application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.

(3) Paving and maintenance of roadways.

(4) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

 # 018 [25 Pa. Code §127.512]
Operating permit terms and conditions.

The active collection systems must meet the following:

(a) Demonstrate that the siting of active collection wells, horizontal collectors, surface collectors, or other extraction devices is of sufficient density throughout all gas producing areas.

(b) Devices located within the interior and along the perimeter shall be designed to achieve uniform control of surface gas emissions.

(c) Design plans must address the following issues: Depth(s) of refuse; Refuse gas generation rates and flow characteristic; Cover properties Gas system expandability; Leachate and condensate management; Accessibility; Compatibility with filling operations; Integration with closure end use; Air intrusion control; Corrosion resistance; Fill settlement; Resistance to the refuse decomposition heat; Topographical map of the surface area and proposed surface monitoring route.

(d) Collection system siting should be of sufficient density to address landfill gas migration issues, and augmentation of the system through the use of active or passive systems at the perimeter or exterior.

(e) The system should control all gas producing areas except those that are excluded because either (1) they are segregated and shown to contain asbestos or nondegradeable material, (documentation must include nature, location, amount of asbestos or nondegradeable material deposited, and date of deposition) or (2) they are nonproductive areas and can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill (amount, location, and age of the material must be documented).

(f) The extraction components must be of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads.

SECTION C. Site Level Plan Approval Requirements

(g) The collection system must be capable of any expansion needed to comply with emission and migration standards.

(h) Collection devices such as wells and horizontal collectors must be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations must be situated to prevent excessive air infiltration.

(i) Vertical wells cannot endanger underlying liners and must address the occurrence of water within the landfill.

(j) Holes and trenches must be of sufficient cross-section for proper construction and completion. For example: the design should call for the centering of pipes and allow for the placement of gravel backfill.

(k) Collection devices must be constructed of PVC, HDPE pipe, fiberglass, stainless steel, or other nonporous corrosion-resistant material and must not allow for air intrusion into the cover, refuse into the collection system, or landfill gas into the atmosphere.

(l) Any gravel used around the pipe perforations should be large enough to prevent penetration or blockage of the perforations.

(m) The connections for collection devices may be above or below ground, but must include: a positive closing throttle valve, necessary seals and couplings, access couplings, and at least one sampling port.

(n) The system must convey the landfill gas to a control system through the collection header pipe(s). The gas mover equipment must be of a size capable of handing the maximum gas generation flow rate expected over the intended use period of the equipment.

(o) The maximum flow rate must be determined by existing flow data, or by alternative landfill gas estimation model pre-approved by PADEP, or by using the following equation.

$$QM = \sum_{i=1}^{2} k\, Lo\, Mi\, (e^{-kti})$$

where,

QM = maximum expected gas generation flow rate, m3/yr
k = methane generation rate constant, year^-1
Lo = methane generation potential, m3/Mg solid waste
Mi = mass of solid waste in the ith section, Mg
ti = age of the ith section, years

 # 019 [25 Pa. Code §127.512]
Operating permit terms and conditions.

Open storage (ponding or open top tanks) of leachate and/or condensate shall not be permitted except in an emergency.

 # 020 [25 Pa. Code §127.512]
Operating permit terms and conditions.

Uncontrolled stripping of VOC from the leachate and/or condensate shall not be permitted.

 # 021 [25 Pa. Code §129.14]
Open burning operations

(a) Air basins. No person may permit the open burning of material in an air basin.

(b) Exceptions: The requirements of subsection (a) do not apply where the open burning operations result from:

(1) A fire set to prevent or abate a fire hazard, when approved by the Department and set by or under the supervision of a public officer.

(2) A fire set for the purpose of instructing personnel in fire fighting, when approved by the Department.

(3) A fire set for the prevention and control of disease or pests, when approved by the Department.

(c) Clearing and grubbing wastes. The following is applicable to clearing and grubbing wastes:

(1) As used in this subsection the following terms shall have the following meanings:

Air curtain destructor -- A mechanical device which forcefully projects a curtain of air across a pit in which open burning is being conducted so that combustion efficiency is increased and smoke and other particulate matter are contained.

Clearing and grubbing wastes -- Trees, shrubs, and other native vegetation which are cleared from land during or prior to the process of construction. The term does not include demolition wastes and dirt laden roots.

(2) Subsection (a) notwithstanding, clearing and grubbing wastes may be burned in a basin subject to the following requirements:

(i) Air curtain destructors shall be used when burning clearing and grubbing wastes.

(ii) Each proposed use of air curtain destructors shall be reviewed and approved by the Department in writing with respect to equipment arrangement, design and existing environmental conditions prior to commencement of burning. Proposals approved under this subparagraph need not obtain plan approval or operating permits under Chapter 127 (relating to construction modification, reactivation and operation of sources).

(iii) Approval for use of an air curtain destructor at one site may be granted for a specified period not to exceed 3 months, but may be extended for additional limited periods upon further approval by the Department.

(iv) The Department reserves the right to rescind approval granted if a determination by the Department indicates that an air pollution problem exists.

(3) Subsection (b) notwithstanding clearing and grubbing wastes may be burned outside of an air basin, subject to the following limitations:

(i) Upon receipt of a complaint or determination by the Department that an air pollution problem exists, the Department may order that the open burning cease or comply with subsection (b) of this section.

(ii) Authorization for open burning under this paragraph does not apply to clearing and grubbing wastes transported from an air basin for disposal outside of an air basin.

(4) During an air pollution episode, open burning is limited by Chapter 137 (relating to air pollution episodes) and shall cease as specified in such chapter.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VIII. COMPLIANCE CERTIFICATION.

No additional compliance certifications exist except as provided in other sections of this plan approval including Section B (relating to Plan Approval General Requirements).

IX. COMPLIANCE SCHEDULE.

No compliance milestones exist.

SECTION D. Source Level Plan Approval Requirements

Source ID: 001 Source Name: LANDFILL OPERATIONS

Source Capacity/Throughput:	145.000 Tons/HR	Municipal Waste
	200.000 Tons/HR	MUNICIPAL WASTE

Conditions for this source occur in the following groups: GROUP 01

I. RESTRICTIONS.

Control Device Efficiency Restriction(s).

 # 001 [25 Pa. Code §127.512]

Operating permit terms and conditions.

Within thirty (30) months from the start of waste placement in a cell, interim gas extraction components (vertical wells, horizontal collectors, or other acceptable collection device) shall be installed. Effective capture of landfill gas from these components shall be initiated as soon as necessary, but no more than 48 months after initial waste placement. The interim collection and control system shall be maintained at all times such that landfill VOC emissions are less than 50 tons per year, 1000 pounds per day, and 100 pounds per hour.

 # 002 [25 Pa. Code §127.512]

Operating permit terms and conditions.

The permittee shall maintain and demonstrate that the active gas collection system has an overall collection efficiency which is based on at least 80% collection efficiency for the Phase IV landfill area and at least 75% collection efficiency for all other landfill areas.

 # 003 [25 Pa. Code §127.512]

Operating permit terms and conditions.

(a) The landfill shall submit to the Department a collection and control system plan, or submit a collection and control plan for an alternative design prepared by a professional engineer. The plan shall be submitted prior to the initiation of construction of the collection system and must demonstrate that the collection system will:

(1) Be designed to handle, over the intended use period of the gas control or treatment system equipment, the maximum expected gas flow rate from the entire landfill area that warrants control;

(2) Collect gas at a sufficient extraction rate (a rate sufficient to maintain a negative pressure at all well heads in the collection system without causing air infiltration, including any well heads connected to the system as a result of expansion or excess surface emissions, for the life of the blower);

(3) Be designed to minimize off-site migration of subsurface gas;

(4) Maintain the VOC emissions from the landfill to less than 50 tons per year, 1000 pounds per day, and 100 pounds per hour.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

SECTION D. Source Level Plan Approval Requirements

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

 # 004 [25 Pa. Code §127.512]
Operating permit terms and conditions.

The owner/operator shall forecast, on an annual basis, the landfill gas generation and collection for the following year. If the forecast indicates that the existing flare (s) is not sufficient to destroy the collected gases, additional approved flare(s) shall be installed and operated within three months of the forecasted date to ensure that the 100 % of the collected gases are incinerated and/or destroyed by other methods approved by the Department.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

SECTION E. Source Group Plan Approval Restrictions.

Group Name: GROUP 01
Group Description: LANDFILL
Sources included in this group

ID	Name
001	LANDFILL OPERATIONS
C002	LANDFILL GAS COLLECTION/ REPLACEMENT FLARE

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §127.512]

Operating permit terms and conditions.

(a) In addition to the visible emission limitations of 25 Pa, Code, Section 123.41, the control device shall also be subject to the following additional limitation:

(1) No flare shall produce visible flames or emissions, except for periods not to exceed a total of 5 minutes in any two (2) consecutive hours. Emissions during these periods shall not exceed 10% opacity.

 # 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1975]

Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
How do I calculate the 3-hour block average used to demonstrate compliance?

Averages are calculated in the same way as they are calculated in 40 CFR part 60, subpart WWW, except that the data collected during the events listed in paragraphs (a), (b), (c), and (d) of this section are not to be included in any average computed under this subpart:

(a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.
(b) Startups.
(c) Shutdowns.
(d) Malfunctions.

Control Device Efficiency Restriction(s).

 # 003 [25 Pa. Code §127.512]

Operating permit terms and conditions.

The following requirements are hereby established for the flare:

(a) The flare must be an enclosed ground type which is shrouded with no visible flame shooting from the flare.

(b) The flare shall be equipped with a continuous pilot ignition source using an auxiliary fuel, e.g., propane, natural gas.

(c) The flare shall be equipped with an automatic shut-off mechanism designed to immediately stop the flow of gases when a flame-out occurs.

(d) The flue gas temperature shall be measured and recorded.

(e) The flare shall be designed for and operated with no visible emissions except for periods not to exceed a total of 5 minutes during any two consecutive hours.

II. TESTING REQUIREMENTS.

 # 004 [25 Pa. Code §127.512]

Operating permit terms and conditions.

SECTION E. Source Group Plan Approval Restrictions.

Source tests shall be conducted on a new or modified flare within 120 days after start-up for: a) either reduction of NMOC by 98 weight percent or reduction of the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen; and b) NOX (measured as NO2). The Department reserves the right to require the owner or operator to conduct further tests at any time after the initial compliance tests.

(a) Testing procedures shall be submitted to the Regional Air Quality Program Manager as specified in General Title V Requirement #020.

(b) All performance tests shall be conducted in accordance with 40 CFR Part 60, Section 60.754 and the Department's source tresting procedures described in the latest Source Testing Manual reference in 25 Pa. Code, Section 139.4(5).

 # 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.754]
Subpart WWW--Standards of Performance for Municipal Solid Waste Landfills
Test methods and procedures.

(a)(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in paragraph (a)(1)(i) of this section or the equation provided in paragraph (a)(1)(ii) of this section. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for Lo, and 4,000 parts per million by volume as hexane for the CNMOC.

(i) The equation in 40 CFR Part 60.754(a)(1(i) shall be used if the actual year-to-year waste acceptance rate is known. The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for (Mi) if the documentation provisions of 40 CFR 60.758 (d)(2) are followed.

(ii) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

MNMOC=2Lo R (e-kc - e-kt) (CNMOC) (3.6 X10-9)

where,

MNMOC=mass emission rate of NMOC, megagrams per year

Lo=methane generation potential, cubic meters per megagram solid waste

R=average annual acceptance rate, megagrams per year

k=methane generation rate constant, year-1

t=age of landfill, years

CNMOC=concentration of NMOC, parts per million by volume as hexane

c=time since closure, years. For active landfill c = O and e-kc=1

3.6 X 10-9=conversion factor

The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R, if the documentation provisions of 60.758(d)(2) are followed.

(2) Tier 1. The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under 60.752(b)(1).

(ii) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the landfill owner shall

either comply with 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in paragraph (a)(3)of this section.

(3) Tier 2. The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C of appendix A of this part or Method 18 of appendix A of this part. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in the analysis. The landfill owner or operator shall divide the NMOC concentration from Method 25C of appendix A of this part by six to convert from CNMOC as carbon to CNMOC as hexane.

(i) The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (a)(1) of this section.

(ii) If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the landfill owner or operator shall either comply with 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in paragraph (a)(4) of this section.

(iii) If the resulting NMOC mass emission rate is less than 50 megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.

(4) Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of this part. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in paragraph (a)(1)(i)or (a)(1)(ii) of this section and using a site-specific methane generation rate constant k, and the site-specific NMOC concentration as determined in paragraph (a)(3)of this section instead of the default values provided in paragraph (a)(1) of this section. The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the owner or operator shall comply with 60.752(b)(2).

(ii) If the NMOC mass emission rate is less than 50 megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in 60.757(b)(1) using the equations in paragraph (a)(1) of this section and using the site-specific methane generation rate constant and NMOC concentration obtained in paragraph (a)(3) of this section. The calculation of the methane generation rate constant is performed only once, and the value obtained is used in all subsequent annual NMOC emission rate calculations.

(5) The owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in paragraphs (a)(3) and (a)(4) of this section if the method has been approved by the Administrator as provided in 60.752(b)(2)(i)(B).

(b) After the installation of a collection and control system in compliance with 60.755, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in 60.752(b)(2)(v), using the following equation:

MNMOC = 1.89 X 10-3 QLFG CNMOC

where,

MNMOC = mass emission rate of NMOC, megagrams per year

QLFG = flow rate of landfill gas, cubic meters per minute

CNMOC = NMOC concentration, parts per million by volume as hexane

(1) The flow rate of landfill gas, QLFG, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of this part.

(2) The average NMOC concentration, CNMOC, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of this part. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C of appendix A of this part by six to convert from CNMOC as carbon to CNMOC as hexane.

(3) The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator as provided in 60.752(b)(2)(i)(B).

(c) The owner or operator of each MSW landfill subject to the provisions of this subpart shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 51.166 or 52.21 of this chapter using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions in 60.752(b)(2) is already installed, the owner or operator shall estimate the NMOC emission rate using the procedures provided in paragraph (b) of this section.

(d) For the performance test required in 60.752(b)(2)(iii)(B), Method 25 or Method 18 of appendix A of this part shall be used to determine compliance with 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by 60.752(b)(2)(i)(B). If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

Control Efficiency = (NMOCin - NMOCout)/(NMOCin)

where,

NMOCin = mass of NMOC entering control device

NMOCout = mass of NMOC exiting control device

III. MONITORING REQUIREMENTS.

 # 006 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

The owner/operator shall forecast, on an annual basis, both the potential and actual VOC emissions for the following year. Actual VOC emission estimates shall include current and scheduled collection system configurations for the forecast year. If the forecast indicates that the existing and scheduled landfill gas collection and control system is not sufficient to maintain emissions of VOC from the landfill below the threshold of 50 tons per year, additional collection and/or control shall be installed within three months of the forecast date to ensure that the VOC emissions do not exceed the 50 tons per year emission limit.

 # 007 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

(a) The permittee shall, on a continuous basis, monitor and record the operating temperature of the enclosed flare, in units

SECTION E. Source Group Plan Approval Restrictions.

of degrees Fahrenheit.

(b) The permittee shall ensure that the enclosed flare (Control Device) is equipped with all applicable monitoring equipment. Such equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's specifications at all times that the flare is in use.

(c) The enclosed flare shall maintain for each 3-hour period of operation based on rolling hourly data, an average combustion temperature of no more than 28 deg C (50.4 deg F) below the average combustion temperature during the most recent performance test in which compliance with the destruction/removal was demonstrated. If there has been no performance test, then a minimum temperature of 1,500 deg F (815.6 deg C) will be necessary.

 # 008 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

The permittee shall, on a monthly basis, determine the total amount of landfill gas generated by the landfill and the total amount of landfill gas combusted by the flare. The total volume of landfill gas generated shall be determined using the EPA Landfill Gas Emissions Model (2.0 or latest version) by inputting actual waste landfilling rates and actual landfill gas (NMOC) concentrations.

 # 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.756]
Subpart WWW--Standards of Performance for Municipal Solid Waste Landfills
Monitoring of operations.

Except as provided in 60.752(b)(2)(i)(B),

(a) Each owner or operator seeking to comply with 60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer or other temperature measuring device at each wellhead and:

(1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in 60.755(a)(3); and

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 60.755(a)(5); and

(3) Monitor temperature of the landfill gas on a monthly basis as provided in 60.755(a)(5).

(b) Each owner or operator seeking to comply with 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

(1) A temperature monitoring device equipped with a continuous recorder and having an accuracy of 1 percent of the temperature being measured expressed in degrees Celsius or 0.5 C, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.

(2) A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control device. The owner or operator shall either:

(i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(c) Each owner or operator seeking to comply with 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

(1) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

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(2) A device that records flow to or bypass of the flare. The owner or operator shall either:

(i) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(d) Each owner or operator seeking to demonstrate compliance with 60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Administrator as provided in 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator shall review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.

(e) Each owner or operator seeking to install a collection system that does not meet the specifications in 60.759 or seeking to monitor alternative parameters to those required by 60.753 through 60.756 shall provide information satisfactory to the Administrator as provided in 60.752(b)(2)(i)(B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures.

(f) Each owner or operator seeking to demonstrate compliance with 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

IV. RECORDKEEPING REQUIREMENTS.

 # 010 [25 Pa. Code §127.512]
Operating permit terms and conditions.

Temperatures shall be recorded whenever the flare is in operation. The recording charts or an electronic version shall be made available to the Department personnel upon request. These records shall be maintained for a period of time not less than two (2) years.

 # 011 [25 Pa. Code §135.5]
Recordkeeping

Source owners or operators shall maintain and make available upon request by the Department records including computerized records that may be necessary to comply with Pa. Code § 135.21 (relating to reporting; and emission statements). These may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions. If direct recordkeeping is not possible or practical, sufficient records shall be kept to provide the needed information by indirect means.

 # 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.758]
Subpart WWW--Standards of Performance for Municipal Solid Waste Landfills
Recordkeeping requirements.

Except as provided in 60.752(b) (2)(i)(B),

(a) Each owner or operator of an MSW landfill subject to the provisions of 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

(b) Each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control

equipment of the data listed in paragraphs (b)(1) through (b)(4) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 60.752(b)(2)(ii):

(i) The maximum expected gas generation flow rate as calculated in 60.755(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

(ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 60.759(a)(1).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

(i) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.

(ii) The percent reduction of NMOC determined as specified in 60.752(b)(2)(iii)(B) achieved by the control device.

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 60.752 (b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

(c) Each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that shall be recorded and reported under 60.757(f):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 oC below the average combustion temperature during the most recent performance test at which compliance with 60.752(b)(2)(iii) was determined.

(ii) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under paragraph (b)(3)(i) of this section.

(2) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 60.756.

(3) Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal, or Federal regulatory requirements.)

(4) Each owner or operator seeking to comply with the provisions of this subpart by use of an open flare shall keep up-to-

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date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(d) Each owner or operator subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under 60.755(b).

(2) Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as provided in 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 60.759(a)(3)(ii).

(e) Each owner or operator subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

 # 013 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1980]
Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
What records and reports must I keep and submit?

[Additional authority for this permit condition is also derived from 40 CFR 63.6(e)(3)(iv)]

If an action taken by the permittee during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the permittee must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event (unless the permittee makes alternative reporting arrangements, in advance, with the EPA or the Department). The letter shall contain the name, title and signature of a responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown and malfunction plan, describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred (or could have occurred in the case of malfunctions), and actions taken to minimize emissions in conformance with 40 CFR 63.6(e)(1)(i).

V. REPORTING REQUIREMENTS.

 # 014 [25 Pa. Code §127.402]
General provisions.

An application, form, report or compliance certification submitted under this subchapter shall contain certification by a responsible official as to truth, accuracy and completeness. This certification and other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

 # 015 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

This landfill is subject to 40 CFR Part 60 Subpart WWW of the Standards of Performance for New Stationary Sources and shall comply with all applicable requirements of this Subpart. 40 CFR §60.4 requires submission of copies of all requests, reports, applications, submittals, and other communications to both EPA and the Department. The EPA copies shall be forwarded to:

Director
Air Protection Division
US EPA, Region III
1650 Arch Street

Philadelphia, PA 19103-2029

 # 016 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

The permittee shall, on a quarterly basis, submit a report demonstrating that the collection/capture efficiency of the landfill gas collection system was in compliance during the preceding three (3) months. This report shall be submitted to the Department within thirty (30) days of the close of the quarter.

 # 017 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.757]
Subpart WWW--Standards of Performance for Municipal Solid Waste Landfills
Reporting requirements.

Except as provided in 60.752(b)(2)(i)(B),

(a) Each owner or operator subject to the requirements of this subpart shall submit an initial design capacity report to the Administrator.

(1) The initial design capacity report shall fulfill the requirements of the notification of the date construction is commenced as required under 60.7(a)(1) and shall be submitted no later than the earliest day from the following:

(i) 90 days of the issuance of the State, Local, Tribal, or RCRA construction or operating permit; or

(ii) 30 days of the date of construction or reconstruction as defined under 60.15; or

(iii) 30 days of the initial acceptance of solid waste.

(2) The initial design capacity report shall contain the following information:

(i) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the provisions of the State, local, Tribal, or RCRA construction or operating permit;

(ii) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the State or local construction or RCRA permit, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with such parameters as depth of solid waste, solid waste acceptance rate, and compaction practices as part of the report. The State, Tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

(3) An amended design capacity report shall be submitted to the Administrator providing notification of any increase in the design capacity of the landfill, whether the increase results from an increase in the permitted area or depth of the landfill, a change in the operating procedures, or any other means which results in an increase in the maximum design capacity of the landfill above 2.5 million megagrams or 2.5 million cubic meters. The amended design capacity report shall be submitted within 90 days of the issuance of an amended construction or operating permit, or the placement of waste in additional land, or the change in operating procedures which will result in an increase in maximum design capacity, whichever occurs first.

(b) Each owner or operator subject to the requirements of this subpart shall submit an NMOC emission rate report to the Administrator initially and annually thereafter, except as provided for in paragraphs (b)(1)(ii) or (b)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 60.754(a) or (b), as applicable.

(i) The initial NMOC emission rate report shall be submitted within 90 days of the date waste acceptance commences

and may be combined with the initial design capacity report required in paragraph (a) of this section. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in paragraphs (b)(1)(ii) and (b)(3) of this section.

(ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Administrator. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(2) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3) Each owner or operator subject to the requirements of this subpart is exempted from the requirements of paragraphs (b)(1) and (2) of this section, after the installation of a collection and control system in compliance with 60.752(b)(2), during such time as the collection and control system is in operation and in compliance with 60.753 and 60.755.

(c) Each owner or operator subject to the provisions of 60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within 1 year of the first report, required under paragraph (b) of this section, in which the emission rate exceeds 50 megagrams per year, except as follows:

(1) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

(2) If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of 60.754(a)(4)and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator within 1 year of the first calculated emission rate exceeding 50 megagrams per year.

(d) Each owner or operator of a controlled landfill shall submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR258.60. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under 60.7(a)(4).

(e) Each owner or operator of a controlled landfill shall submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1) The equipment removal report shall contain all of the following items:

(i) A copy of the closure report submitted in accordance with paragraph (d) of this section;

(ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in 60.752(b)(2)(v) have been met.

(f) Each owner or operator of a landfill seeking to comply with 60.752(b)(2) using an active collection system designed in accordance with 60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) of this paragraph. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under 60.756(a), (b), (c), and (d).

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 60.756.

(3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.

(4) All periods when the collection system was not operating in excess of 5 days.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6) The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of 60.755.

(g) Each owner or operator seeking to comply with 60.752(b)(2)(i) shall include the following information with the initial performance test report required under 60.8:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

(3) The documentation of the presence of asbestos or non-degradable material for each area from which collection wells have been excluded based on the presence of asbestos or non-degradable material;

(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area; and

(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

(6) The provisions for the control of off-site migration.

 # 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1965]
Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
What is a deviation?

A deviation is defined in Sec. 63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs (a) through (c) of this section.

(a) A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of subpart WWW are exceeded.

(b) A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.

(c) A deviation occurs when a SSM plan is not developed, implemented, or maintained on site.

VI. WORK PRACTICE REQUIREMENTS.

 # 019 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.752]
Subpart WWW--Standards of Performance for Municipal Solid Waste Landfills
Standards for air emissions from municipal solid waste landfills.

(a) Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume shall submit an initial design capacity report to the Administrator as provided in 60.757(a). The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. For purposes of part 70 permitting, a landfill with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters does not require an operating permit under part 70 of this chapter. Submittal of the initial design capacity report shall fulfill the requirements of this subpart except as provided for in paragraphs (a)(1) and (a)(2) of this section.

(1) The owner or operator shall submit to the Administrator an amended design capacity report, as provided for in 60.757(a)(3), when there is any increase in the design capacity of a landfill subject to the provisions of this subpart, whether the increase results from an increase in the area or depth of the landfill, a change in the operating procedures of the landfill, or any other means.

(2) If any increase in the maximum design capacity of a landfill exempted from the provisions of 60.752(b)through60.759 of this subpart on the basis of the design capacity exemption in paragraph (a) of this section results in a revised maximum design capacity equal to or greater than 2.5 million megagrams or 2.5 million cubic meters, the owner or operator shall comply with the provision of paragraph (b) of this section.

(b) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams or 2.5 million cubic meters, shall either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in 60.754. The NMOC emission rate shall be recalculated annually, except as provided in 60.757(b)(1)(ii) of this subpart. The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams or 2.5 million cubic meters is subject to part 70 permitting requirements. When a landfill is closed, and either never needed control or meets the conditions for control system removal specified in 60.752(b)(2)(v) of this subpart, a part 70 operating permit is no longer required.

(1) If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall:

(i) Submit an annual emission report to the Administrator, except as provided for in 60.757(b)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.

(A) If the NMOC emission rate, upon recalculation required in paragraph (b)(1)(ii) of this section, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with paragraph (b)(2) of this section.

(B) If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in 60.757(d).

(2) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

(i) Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year:

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(A) The collection and control system as described in the plan shall meet the design requirements of paragraph (b)(2)(ii) of this section.

(B) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 60.753 through 60.758 proposed by the owner or operator.

(C) The collection and control system design plan shall either conform with specifications for active collection systems in 60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to 60.759.

(D) The Administrator shall review the information submitted under paragraphs (b)(2)(i)(A), (B) and (C) of this section and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.

(ii) Install a collection and control system within 18 months of the submittal of the design plan under paragraph (b)(2)(i) of this section that effectively captures the gas generated within the landfill.

(A) An active collection system shall:

(1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;

(2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:

(i) 5 years or more if active; or

(ii) 2 years or more if closed or at final grade;

(3) Collect gas at a sufficient extraction rate;

(4) Be designed to minimize off-site migration of subsurface gas.

(B) A passive collection system shall:

(1) Comply with the provisions specified in paragraphs (b)(2)(ii), (A)(1), (2), and (4) of this section.

(2) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 258.40 of this title.

(iii) Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii)(A), (B) or (C) of this section.

(A) An open flare designed and operated in accordance with 60.18;

(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test, required under 60.8 using the test methods specified in 60.754(d).

(1) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.

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(2) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in 60.756;

(C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of this section.

(iv) Operate the collection and control device installed to comply with this subpart in accordance with the provisions of 60.753, 60.755 and 60.756.

(v) The collection and control system may be capped or removed provided that all the conditions of paragraphs (b)(2)(v) (A), (B), and (C) of this section are met:

(A) The landfill shall be no longer accepting solid waste and be permanently closed under the requirements of 258.60 of this title. A closure report shall be submitted to the Administrator as provided in 60.757(d);

(B) The collection and control system shall have been in operation a minimum of 15 years; and

(C) Following the procedures specified in 60.754(b) of this subpart, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

 # 020 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.753]
Subpart WWW--Standards of Performance for Municipal Solid Waste Landfills
Operational standards for collection and control systems.

Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of 60.752(b)(2)(ii) of this subpart shall:

(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade;

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 60.757(f)(1);

(2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by 60.752(b)(2)(i) of this subpart.

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(2) Unless an alternative test method is established as allowed by 60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A except that:

(i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(ii) A data recorder is not required;

(iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(iv) A calibration error check is not required;

(v) The allowable sample bias, zero drift, and calibration drift are 10 percent.

(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and

(f) Operate the control or treatment system at all times when the collected gas is routed to the system.

(g) If monitoring demonstrates that the operational requirement in paragraphs (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in 60.752(a)(3) through (5)or 60.755(c) of this subpart. If corrective actions are taken as specified in 60.755, the monitored exceedance is not a violation of the operational requirements in this section.

 # 021 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.755]
Subpart WWW--Standards of Performance for Municipal Solid Waste Landfills
Compliance provisions.

(a) Except as provided in 60.752(b)(2)(i)(B), the specified methods in paragraphs (a)(1) through (a)(6) of this section shall be used to determine whether the gas collection system is in compliance with 60.752(b)(2)(ii).

(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 60.752(b)(2)(ii)(A) (1), one of the following equations shall be used. The k and Lo kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(i) For sites with unknown year-to-year solid waste acceptance rate:

$Qm = 2Lo\ R\ (e^{-kc} - e^{-kt})$

where,

Qm = maximum expected gas generation flow rate, cubic meters per year

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Lo = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year -1

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

c = time since closure, years (for an active landfill c = O and e-kc = 1)

(ii) For sites with known year-to-year solid waste acceptance rate:
To view Figure, TAB to this link, then press ENTER. There will be a pause while the figure-viewing software loads.

where,

QM=maximum expected gas generation flow rate, cubic meters per year

k=methane generation rate constant, year-1

Lo=methane generation potential, cubic meters per megagram solid waste

Mi=mass of solid waste in the ith section, megagrams

ti=age of the ith section, years

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in paragraphs (a)(1)(i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in paragraphs (a)(1)(i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

(2) For the purposes of determining sufficient density of gas collectors for compliance with 60.752(b)(2)(ii)(A)(2), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 60.752(b)(2)(ii)(A) (3), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under 60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

(4) Owners or operators are not required to install additional wells as required in paragraph(a)(3) of this section during the first 180 days after gas collection system start-up.

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

(6) An owner or operator seeking to demonstrate compliance with 60.752(b)(2)(ii)(A)(4) through the use of a collection

system not conforming to the specifications provided in 60.759 shall provide information satisfactory to the Administrator as specified in 60.752(b) (2)(i)(C) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with 60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in 60.752(b)(2)(i). Each well shall be installed within 60 days of the date in which the initial solid waste has been in place for a period of:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade.

(c) The following procedures shall be used for compliance with the surface methane operational standard as provided in 60.753(d).

(1) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a serpentine pattern spaced 30 meters apart (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) of this section.

(2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of this part, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in paragraphs (c)(4) (i) through (v) of this section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 60.753(d).

(i) The location of each monitored exceedance shall be marked and the location recorded.

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.

(iii) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph (c)(4)(v) of this section shall be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v)has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph (c)(4)(ii) or (iii) of this section shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in paragraph (c)(4)(iii) or (v) shall be taken.

(v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

(5) The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

(d) Each owner or operator seeking to comply with the provisions in paragraph (c) of this section shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

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(1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of this part, except that "methane" shall replace all references to VOC.

(2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

(3) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of this part shall be used.

(4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of this part shall be followed immediately before commencing a surface monitoring survey.

(e) The provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

 # 022 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.759]
Subpart WWW--Standards of Performance for Municipal Solid Waste Landfills
Specifications for active collection systems.

(a) Each owner or operator seeking to comply with 60.752(b)(2)(i) shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in 60.752(b)(2)(i)(C) and (D):

(1) The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.

(2) The sufficient density of gas collection devices determined in paragraph (a)(1) of this section shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

(3) The placement of gas collection devices determined in paragraph (a)(1) of this section shall control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

(i) Any segregated area of asbestos or non-degradable material may be excluded from collection if documented as provided under 60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or non-degradable material deposited in the area, and shall be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

Qi = 2 k Lo Mi (e-kti) (CNMOC) (3.6 X 10-9)

where,

Qi = NMOC emission rate from the ith section, megagrams per year

k = methane generation rate constant, year -1

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Lo = methane generation potential, cubic meters per megagram solid waste

Mi = mass of the degradable solid waste in the ith section, megagram

ti = age of the solid waste in the ith section, years

CNMOC = concentration of non-methane organic compounds, parts per million by volume

3.6 x 10 -9 = conversion factor

(iii) The values for k, Lo, and CNMOC determined in field testing shall be used, if field testing has been performed in determining the NMOC emission rate or the radii of influence. If field testing has not been performed, the default values for k, Lo and CNMOC provided in 60.754(a)(1) shall be used. The mass of non-degradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the non-degradable material is documented as provided in paragraph (a)(3)(i)of this section.

(b) Each owner or operator seeking to comply with 60.752(b)(2)(i)(A) shall construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

(2) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

(3) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

(c) Each owner or operator seeking to comply with 60.752(b)(2)(i)(A) shall convey the landfill gas to a control system in compliance with 60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

(1) For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (c)(2) of this section shall be used.

(2) For new collection systems, the maximum flow rate shall be in accordance with 60.755(a)(1).

 # 023 [40 CFR Part 61 NESHAPs §40 CFR 61.12]
Subpart A--General Provisions
Compliance with standards and maintenance requirements.

In accordance with 40 CFR 61.12(c), the owner or operator of each stationary source shall maintain and operate the source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be

based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the source.

 # 024 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1980]
Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
What records and reports must I keep and submit?

[Additional authority for this permit condition is also derived from 40 CFR 63.6(e)(1)(i) and (ii)]

(a) During a period of startup, shutdown, or malfunction, the general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved.

(b) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction, plan pursuant to 40 CFR Sec 63.6(e)(3). To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

SECTION F. Alternative Operation Requirements.

No Alternative Operations exist for this Plan Approval facility.

SECTION G. Emission Restriction Summary.

No emission restrictions listed in this section of the permit.

SECTION H. Miscellaneous.

****** End of Report ******